

## IN THE SPECIFICATION

Please replace paragraph 49 (in the published application) with the following:

Cavitation initiation source 105 emits energetic particle or wave energy 140, the energy 140 directed to strike metastable region 125. A controller 108 coupled to cavitation initiation source 105 is provided for synchronizing delivery of cavitation signals from the cavitation initiation source 105. Cavitation initiation source 105 directs cavitation source energy to the metastable liquid region 125 sufficient to bubble nucleate at least one bubble having a bubble radius greater than a critical bubble radius of the liquid. The critical bubble radius ( $r_{crit}$ ) is a function of the pressure within the bubble ( $P_{bubble}$ ), the ambient pressure ( $P_{ambient}$ ) and the surface tension of liquid ( $\sigma$ ) and is given by the following equation:

$$r_{crit} = 2 \sigma / (P_{bubble} - P_{ambient})$$